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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/517,059	03/02/2000	Douglas Streeter Daudelin	2925-322P	4432

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EXAMINER

GARY, ERIKA A

ART UNIT	PAPER NUMBER
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2681

9

DATE MAILED: 12/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

TS

Office Action Summary

Application No.

09/517,059

Applicant(s)

DAUDELIN ET AL.

Examiner

Erika A. Gary

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 September 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 18-22 is/are rejected.
- 7) ☒ Claim(s) 4-17, and 23-25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 18, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Barrere et al., US Patent Number 5,715,518 (hereinafter Barrere).

Regarding claim 1, Barrere discloses a method for monitoring whether a subscriber station is operating in an authorized area, the method comprising: monitoring an operational composite fingerprint for the subscriber station; and comparing the operational composite fingerprint to a characteristic composite fingerprint for the subscriber station to determine if the subscriber station is operating within the authorized area [abstract; col. 2: lines 42-67; col. 7: lines 8-36].

Regarding claim 2, Barrere discloses prior to the comparing step, the step of defining the characteristic composite fingerprint for the subscriber station associated with operating in an authorized area [col. 2: lines 42-67; col. 7: lines 8-36].

Regarding claim 18, Barrere discloses a system for monitoring whether a subscriber station is operating in an authorized area, comprising: a monitor for monitoring an operational composite fingerprint for the subscriber station; and a processor for comparing the operational composite fingerprint to a characteristic

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composite fingerprint for a subscriber station to determine if the subscriber station is operating in an authorized area [abstract; col. 2: lines 42-67; col. 7: lines 8-36].

Regarding claim 19, Barrere discloses a storage device for storing the characteristic composite fingerprint for a subscriber station associated with operating in an authorized area [col. 2: lines 42-67; col. 7: lines 8-36].

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hilsenrath et al., US Patent Number 6,026,304.

Regarding claim 1, Hilsenrath discloses a method for monitoring where a subscriber station is operating, the method comprising: monitoring an operational composite fingerprint for the subscriber station [col. 4: lines 40-50]; and comparing the operational composite fingerprint to a characteristic composite fingerprint to determine where the subscriber station is operating [col. 4: lines 56-67].

What Hilsenrath does not specifically disclose is that the monitoring is done to determine if the subscriber station is in an authorized area. However, at the time of the invention, it would have been obvious to one of ordinary skill in the art to include this feature. The motivation for this modification, as suggested by Hilsenrath [col. 12: lines

64-66] would have been to track the subscriber station for location-based billing and/or prevention of cellular fraud by making sure the subscriber is in an authorized area.

Hilsenrath also does not specifically disclose that the characteristic composite fingerprint is for the subscriber station. Hilsenrath discloses that the characteristic composite fingerprint is compiled using a calibration mobile. However, it would have been obvious to use signals from the subscriber station to preserve system resources by not having to involve a second device.

Regarding claim 2, Hilsenrath discloses prior to the comparing step, the step of defining the characteristic composite fingerprint for the subscriber station associated with operating in an authorized area [col. 4: lines 58-62].

Regarding claim 3, Hilsenrath suggests the defining step comprises organizing a first histogram of observations of propagational delays associated with a reverse link transmission of the subscriber station from the authorized area [col. 7: line 66 – col. 8: line 14].

5. Claims 18-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hilsenrath.

Regarding claim 18, Hilsenrath discloses a system for monitoring where a subscriber station is operating comprising: a monitor for monitoring an operational composite fingerprint for the subscriber station [col. 4: lines 40-50]; and a processor for comparing the operational composite fingerprint to a characteristic composite fingerprint to determine where the subscriber station is operating [col. 4: lines 56-67].

What Hilsenrath does not specifically disclose is that the monitoring is done to determine if the subscriber station is in an authorized area. However, at the time of the invention, it would have been obvious to one of ordinary skill in the art to include this feature. The motivation for this modification, as suggested by Hilsenrath [col. 12: lines 64-66] would have been to track the subscriber station for location-based billing and/or prevention of cellular fraud by making sure the subscriber is in an authorized area. Hilsenrath also does not specifically disclose that the characteristic composite fingerprint is for the subscriber station. Hilsenrath discloses that the characteristic composite fingerprint is compiled using a calibration mobile. However, it would have been obvious to use signals from the subscriber station to preserve system resources by not having to involve a second device.

Regarding claim 19, Hilsenrath discloses a storage device for storing the characteristic composite fingerprint for a subscriber station associated with operating in an authorized area [col. 4: lines 56-62].

Regarding claim 20, Hilsenrath discloses an antenna monitor for monitoring the number of temporally offset receive signals, originating from a transmission of the subscriber station, incident upon each distinct uplink antenna set of a base station [fig. 4: ref. 76; col. 6: lines 12-23].

Regarding claim 21, Hilsenrath discloses the monitor comprises a propagational delay measurer for measuring the propagational delays of temporally offset receive signals originating from a transmission of the subscriber station [col. 4: lines 48-50; col. 7: line 66 – col. 8: line 4].

Regarding claim 22, Hilsenrath suggests the characteristic composite fingerprint includes a first histogram of observations of propagational delays associated with a reverse link transmission of the subscriber station from the authorized area [col. 7: line 66 – col. 8: line 14].

Allowable Subject Matter

6. Claims 4-17 and 23-25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Regarding claims 4-6, and 23-25, prior art does not suggest or render obvious defining a characteristic composite fingerprint comprising organizing histograms of antenna observations per antenna set, organizing a probability density function, or grouping propagational delay factors based on pseudo-random codes. Regarding claims 7-11, prior art does not suggest or render obvious incrementing antenna set counters and counter bins associated with corresponding observations in a first histogram of propagational delays and in a second histogram of antenna observations. Regarding claims 12-15, prior art does not suggest or render obvious determining whether a histogram of propagational delay factors fall within a propagational delay mask; and determining whether a histogram of measured observations of antenna sets fall within an antenna mask. Regarding claims 16 and 17, prior art does not suggest or render obvious determining if a second statistical representation exceeds a maximum outside prominent characteristic of measured observations of propagational delays.

Response to Arguments

7. Applicant's arguments filed September 16, 2003 have been fully considered but they are not persuasive. Applicant argues that Barrere does not disclose comparing an operational composite fingerprint to a characteristic composite fingerprint to determine if the subscriber is operating within an authorized area. However, the Examiner respectfully disagrees. In the abstract of the disclosure, Barrere specifically states that the invention extracts a portion of a transmitted waveform (operational composite fingerprint) and compares the transmission characteristics to a stored fingerprint (characteristic composite fingerprint) of the transmitter or cellular phone (subscriber station). Further the cited portions of Barrere, col. 2: lines 42-67 and col. 7: lines 8-36, teach establishing the reference fingerprint (characteristic composite fingerprint) and comparing it with current transmitted waveforms (operational composite fingerprint). This subsequently determines if the subscriber station is an authenticated station, thus operating in an authorized area.

Applicant further argues that Hilsenrath does not disclose comparing an operational composite fingerprint of a subscriber station to a characteristic composite fingerprint of the subscriber station. The Examiner respectfully disagrees. Hilsenrath teaches monitoring an operational composite fingerprint (signal signature) of a subscriber station in col. 4: lines 40-50. Hilsenrath then compares this operational composite fingerprint with a characteristic composite fingerprint (calibrated signal signatures) [see col. 4: lines 56-67]. The calibrated signal signature corresponds to a

fingerprint of a mobile station operating in a known area. The difference between Hilsenrath and the present invention is that Hilsenrath's characteristic composite fingerprint is generated by a calibration mobile and not the subscriber station as in the present invention. However, the Examiner maintains that it would have been obvious at the time of the invention to use signals from the subscriber station instead of a calibration mobile to preserve resources by reducing the number of components in the system. Applicant challenges this assertion and states that excess components (phone, GPS receiver, computer) would be required for this modification. The Examiner disagrees as the subscriber station is the "phone" and the GPS receiver and computer function can easily be incorporated into the subscriber station as the computer is only used to transmit the GPS data to the phone. It is well known in the art for subscriber stations to have a GPS receiver wherein the subscriber station transmits the GPS data to a remote location (i.e. base station). Therefore, the Examiner contends that the present invention is obvious over Hilsenrath.

Applicant's arguments regarding Rao are moot, as the rejection of claims 1, 2, 18, and 19 in view of Rao has been withdrawn. However, claims 1, 2, 18, and 19 are still separately rejected in view of Barrere and in view of Hilsenrath.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erika A. Gary whose telephone number is 703-308-0123. The examiner can normally be reached on Monday-Thursday and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh N. Tran can be reached on 703-305-4040. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4750 or to the 2600 Customer Service Office at 703-306-0377.

Any response to this final action should be mailed to:

Box AF

Commissioner of Patents and Trademarks
Washington, D.C. 20231


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or faxed to:

(703) 872-9306 (for informal or draft communications, please label
"PROPOSED" or "DRAFT").

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal
Drive Arlington, VA., Sixth Floor (Receptionist).

EAG
November 30, 2003


ERIKA CARY
PATENT EXAMINER